UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,636	09/14/2001	James J. Croft III	T8534.CIP	7553

20551 7590 01/11/2006

THORPE NORTH & WESTERN, LLP.
8180 SOUTH 700 EAST, SUITE 200
SANDY, UT 84070

EXAMINER	
ENSEY, BRIAN	

ART UNIT	PAPER NUMBER
2646	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/954,636	CROFT, JAMES J.	
	Examiner	Art Unit	
	Brian Ensey	2646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-12,14-20 and 25-32* is/are allowed.

6)☒ Claim(s) *21-24 and 33-35* is/are rejected.

7)☒ Claim(s) *10 and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/3/02,6/5/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: In the "Brief Description of the Drawings" section of the specification on pages 5 and 6 there are numerous errors. On page 5, line 27, it states "Fig. 8 illustrates...", but the description does not match figure 8 in the drawings and appears to describe figure 10 of the drawings. On page 5, line 29, it states "Fig. 9 depicts...", but the description does not match figure 9 in the drawings and appears to describe figure 8 of the drawings. On page 6, line 1, it states "Fig. 10 shows...", but the description does not match figure 10 in the drawings and appears to describe figure 9 of the drawings. On page 6, line 3, it states "Fig. 11 represents a side view of FIG. 14 is taken along lines 15-15, but there are no "lines 15-15" in FIG. 14 therefore it is unclear what figure 11 represents.

Appropriate correction is required.

Claim Objections

Claim 10 is objected to because of the following informalities: There is a spelling error on line 18, "has" should be changed to "as". Appropriate correction is required.

Claim 13 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 12. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21-24 and 33-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakano U.S. Patent No. 5,629,502.

Regarding claim 21, Nakano discloses a method for acousti-mechanically configuring a low range speaker system for use in an audio system which enables reduction of speaker size requirements for upper range speaker systems when using said low range speaker system as a subwoofer, said method comprising the steps of: a) configuring said low range speaker system to include multiple, low pass acoustic filter structures to achieve at least a third order acoustic low pass characteristic (See Fig 4; acoustic compliance 4, passive radiator 18, acoustic compliance 3 and acoustic mass 6 to form an acoustic filter with a fourth order acoustic low pass characteristic); b) configuring a transducer (12) with a vibratable diaphragm to be filtered by said low pass acoustic filter structures; and c) operating a low frequency passive acoustic radiator operating in parallel (mounted on dividing wall 2 and operating in parallel with passive radiator 18) with said transducer such that said passive acoustic radiator is filtered by said low pass acoustic filter structures (See Fig. 4).

Regarding claim 22, Nakano further discloses the step of configuring said low pass acoustic filter structures to achieve at least a fourth order acoustic low pass characteristic (See

Fig 4; acoustic compliance 4, passive radiator 18, acoustic compliance 3 and acoustic mass 6 to form an acoustic filter with a fourth order acoustic low pass characteristic).

Regarding claim 23, Nakano discloses a method for acousti-mechanically configuring a low range speaker system for use in an audio system to enhance audio output capability, said method comprising the steps of: a) configuring said low range speaker system to include multiple, lowpass acoustic filter structures to achieve at least a third order acoustic low pass characteristic (See Fig 4; acoustic compliance 4, passive radiator 18, acoustic compliance 3 and acoustic mass 6 to form an acoustic filter with a fourth order acoustic low pass characteristic); b) configuring a transducer (12) with a vibratable diaphragm to be filtered by said low pass acoustic filter structures; and c) operating a low frequency passive acoustic radiator in parallel (mounted on dividing wall 2 and operating in parallel with passive radiator 18) with said transducer such that said passive acoustic radiator is filtered by said low pass acoustic filter structures (See Fig. 4).

Regarding claim 24, Nakano further discloses the step of configuring said low pass acoustic filter structures to achieve at least a fourth order acoustic low pass characteristic (See Fig 4; acoustic compliance 4, passive radiator 18, acoustic compliance 3 and acoustic mass 6 to form an acoustic filter with a fourth order acoustic low pass characteristic).

Regarding claim 23, Nakano discloses a method for acousti-mechanically configuring a low range speaker system for use in an audio system with the improvement of attenuating internal resonances and other unwanted output above an operating passband, said method comprising the steps of: a) configuring said low range speaker system to include multiple, lowpass acoustic filter structures to achieve at least a third order acoustic low pass characteristic

(See Fig. 1: acoustic compliance 4, passive acoustic radiator 101, acoustic compliance 3 and acoustic mass 6 to form an acoustic filter with a fourth order acoustic low pass characteristic); and b) configuring a transducer with a vibratable diaphragm for which all output of one side of said vibratable diaphragm that is delivered to the region outside said low range speaker system is filtered by all of said low pass acoustic filter structures (output from rear side of diaphragm 17 is all delivered outside enclosure 1 by all of the low pass acoustic structure as in Fig. 1).

Regarding claim 34, Nakano further discloses the step of configuring said low pass acoustic filter structures to achieve at least a fourth order acoustic low pass characteristic (See Fig. 1: acoustic compliance 4, passive acoustic radiator 101, acoustic compliance 3 and acoustic mass 6 to form an acoustic filter with a fourth order acoustic low pass characteristic).

Regarding claim 35, Nakano further discloses including the further step of: c) configuring a low frequency passive acoustic radiator (101) operating in parallel with and intercoupling the same subchambers as said transducer (mounted on dividing wall 2 and operating in parallel with passive radiator 17) such that the output of said passive acoustic radiator is also filtered by all of said low pass acoustic filter structures (By applicants own admission a vent or passive diaphragm may be interchangeably used in any of the passive radiators. See applicant's specification page 14, lines 3-10).

Allowable Subject Matter

Claims 1-12, 14-20 and 25-32 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Ensey whose telephone number is 571-272-7496. The examiner can normally be reached on Monday - Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Va. 22313-1450

Or faxed to:

(571) 273-8300, for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand-delivered responses should be brought to:

Customer Service Window
Randolph Building
401 Dulany Street
Arlington, VA 22314

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SINH TRAN
SUPERVISORY PATENT EXAMINER

BKE
January 6, 2006